

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1 - 18 (Cancelled).

19. (Currently Amended) A pointing device comprising:

a ring-like magnet that is movably supported in parallel to a plane, and is
~~internally and externally~~ magnetized in the direction of its radius, of
~~said ring-like magnet~~ and includes two or more sets of north-south
magnetic poles; and

a plurality of magnetic sensors for detecting magnetic flux density
produced by said ring-like magnet in a direction parallel to the plane
are placed outside or inside said ring-like magnet, wherein
said magnetic sensors are disposed symmetrically from each other to said
ring-like magnet,

said magnetic sensors detect variations in the magnetic flux density in the
direction parallel to the plane, the variations being caused by
movement in a direction parallel to the plane of said ring-like
magnet.

20. (Previously Presented) The pointing device as claimed in claim 19, wherein said
ring-like magnet is internally and externally unipolarly magnetized.

21. (Previously Presented) The pointing device as claimed in claim 19, further comprising a printed circuit board on which a resin layer with elastic deformation is provided, wherein said ring-like magnet is fixed to said resin layer, and said ring-like magnet is movably supported in parallel to said printed circuit board, said magnetic sensors are placed on said printed circuit board.
22. (Cancelled).
23. (Previously Presented) The pointing device as claimed in claim 19, wherein said magnetic sensors are magnetic sensors utilizing Hall effect, and the output signals are proportional to the magnetic flux density.
24. (Previously Presented) The pointing device as claimed in claim 19, wherein said magnetic sensors are magnetic sensors utilizing magneto-resistive effect.
25. (Previously Presented) The pointing device as claimed in claim 19, further comprising an origin returning means for returning said ring-like magnet to the origin using magnetic force generated by said ring-like magnet.
26. (Currently Amended) The pointing device as claimed in claim 19, wherein ~~said ring-like magnet is magnetized in the direction of its radius and magnetized in a multipolar manner in the direction of its circumference, and~~ said magnetic sensors are disposed and faced to a magnetic pole center of said ring-like magnet magnetized in a multipolar manner.
- 27-32 (Cancelled).

33. (Previously Presented) The pointing device as claimed in claim 21, wherein said resin layer and said printed circuit board have their opposing faces not bonded to each other.
34. (Previously Presented) The pointing device as claimed in claim 21, wherein said resin layer is an elastic sheet.
35. (Previously Presented) The pointing device as claimed in claim 21, wherein said resin layer is a silicone resin.
36. (Cancelled).
37. (Previously Presented) The pointing device as claimed in claim 21, further comprising a switch on the resin layer side of said printed circuit board and at about the center of said ring-like magnet.
38. (Previously Presented) The pointing device as claimed in claim 37, further comprising a projection for depressing said switch at a portion facing said switch on said resin layer.
- 39-42. (Cancelled).
43. (Previously Presented) The pointing device as claimed in claim 23, wherein said magnetic sensors utilizing the Hall effect are disposed on the resin layer side of said printed circuit board to detect the magnetic flux density in a direction parallel to the surface of said printed circuit board.
44. (Previously Presented) The pointing device as claimed in claim 23, wherein said magnetic sensors utilizing the Hall effect are magnetic sensors with a single output terminal.

45. (Cancelled).
46. (Previously Presented) The pointing device as claimed in claim 24, wherein said magnetic sensors utilizing the magneto-resistive effect are semiconductor magneto-resistive elements which are disposed on the resin layer side of said printed circuit board to detect the magnetic flux density in a direction parallel to the surface of said printed circuit board.
47. (Previously Presented) The pointing device as claimed in claim 24, wherein said magnetic sensors utilizing the magneto-resistive effect are four semiconductor magneto-resistive elements disposed symmetrically on X and Y axes, which are two axes on a two dimensional plane of an orthogonal system, wherein two magnetic sensors on the X axis are electrically connected at a first connection point; and two magnetic sensors on the Y axis are electrically connected at a second connection point, and wherein said pointing device detects variations in ambient magnetic flux density caused by movement of said ring-like magnet using electric signals at the first and second connection points.
48. (Cancelled).
49. (Previously Presented) An electronic device incorporating the pointing device as defined in any one of claims 19-21, 23-26, 33-35, 37, 38, 43, 44, 46, and 47.
- 50 (New) The pointing device as claimed in claim 19, wherein said ring-type magnet is magnetized at M sets of north-south poles, where $M = K \times I$, K equals the number of magnetic sensors, and I is an integer equal to or greater than one.